



Missouri Department of Natural Resources

TMDL Policy Advisory Committee July 17, 2001, Meeting Minutes

Also:

Subcommittee Minutes – page 4

Attachment about Using Watershed Management Plans as TMDLs – page 9

Attachment of Case Studies on Permit Issues – page 12

There were 41 people present at the meeting.

TMDL update – The *Memorandum of Understanding* between DNR & EPA required the development of a higher level of volunteer monitoring. The goal was to allow volunteer data to be more useful in agency decision making. The protocol for Level IV monitoring was completed by the June 30th deadline. Randy Crawford explained that volunteer data was previously used for screening purposes, identification of problems and the 305(b) report. Three levels of quality assurance (QA) on volunteer data currently exist. This protocol will be 4th level. The plan entails training volunteers that have participated in the existing 3 levels of QA to collect samples according to DNR protocols. All agency field staff go through several trainings learning about sample collection, DNR's procedures for documenting samples and preserving samples correctly. The DNR laboratory analyzes these samples. This protocol will allow for the collection of data of known quality that the department can use at a higher level than volunteer data is currently being used. Texas, Colorado and other states have similar programs. The question has been asked if this will elevate volunteer data to the level of agency collected data. The answer is no, it will not be equal to USGS or DNR collected data, but would fit more accurately in the second tier of data acceptability.

John Madras reported on the *Water Quality Standards (WQS) revisions*. Six meetings have been held over the last six months related to standards revisions. The agency is trying to remedy problems with Missouri's standards as identified by EPA. Staff will now evaluate the input they received and incorporate it into the rule making process as appropriate. The administrative process takes time and some stakeholders will be contacted individually about issues they raised. Especially regarding comments related to the Aquatic Resource Mitigation Guidelines and the Channel Modification Guidelines.

The *July 6 Impaired Waters list* was retracted because it didn't give adequate notice for the public meetings. A similar notice will be sent out soon. The list will look much the same as the information sent out on July 6. The public comment period will last 60 days and there will be a months notice for public meetings. Following that, staff will evaluate the information and make a final recommendation to the Clean Water Commission on the 2002 impaired waters list. Everyone on the mailing list for the TMDL Policy Advisory Committee, the Water Quality Coordinating Committee, public notice list for NPDES permits or the commissioners mailing list will receive the information. Others may contact the agency and it will be provided to them.

Stream Teams - several copies of the most recent National Vol. Monitoring Newsletter are available. The theme of this issue is volunteer monitors, the Clean Water Act and TMDLs. It tells how volunteer data is being used and activities going on around the country. Copies of the Stream Team Annual Report are also available.

EPA has filed a motion to delay the *July 2000 final TMDL rule*, which was to take effect October 2001. They have revised the target for issuance of the new rule until April 2003. States have been told to proceed with TMDL development under the existing rule.

Summary of the National Academy of Sciences evaluation of the TMDL program as ordered by Congress:

- All water bodies should have a Use Attainability Analysis (UAA) prior to development of a TMDL. UAAs are studies that determine if a water is capable of supporting its designated uses. Some states have reported it can cost as much to do a UAA as it does to produce a TMDL.
- At least two lists should be developed. They would be a Preliminary List and an Action List. At issue is the lack of data states have available to determine impairments. A preliminary list would be waters that need more monitoring. The action list would be waters that definitely are impaired and need a TMDL.
- Water Quality Standards and the criterion for 303d listing should be basically the same across the country.
- The science does exist to generate TMDLs. But there is inherent inaccuracy in dealing with watersheds due to their complexity. Accurate scientific methods and data collection should be a priority.

A list of facilities that could potentially be impacted by TMDLs was handed out to the group.

Anne Peery provided an *update on the status of existing TMDLs*.

- Piney River, Oregon Co. – TMDL was written to get a chlorinated discharge de-chlorinated. The issue is whether to reopen the permit and include dechlorination now, or wait until its scheduled renewal in fall 2004.
- Ron Rog & Hwy 141 wastewater plants in Jefferson Co. (Saline Cr.) have been dragging their feet for a long time in resolving their water quality problems. Permit renewals are presently being worked on that include a time frame for complying with the “no discharge to Saline Creek” requirement stipulated in the TMDL.
- Rock Cr. is coming up for renewal and the MSD regional facility will be permitted soon. It will take several months to get through the process.

She reminded the group there is more to the process than collecting data and writing a document. The state must conduct post-monitoring after remediation efforts have been implemented and follow-up to make sure actions identified in the implementation plan occur.

TMDL Activity Report

- The agency has to produce 9 TMDLs this year and hope to complete 18
- Staff are writing information sheets on specific waterbodies and their impairments
- A progress report on activities related to the MOU is due in August

- Missouri's footage for the TMDL National Video was excellent and was comprised mostly of interviews with citizens (when video is available, committee members will be provided copies)
- Money from a 106 grant from EPA will go toward database development
- A list of TMDL presentations was included in the report

Report on "Watersheds 103" TMDL workshops:

- Mary West stated the workshop helped clear up some of the fuzzy issues for her. She didn't realize that when a waterbody had multiple impairments, a TMDL had to be written for each impairment. She felt it was an excellent opportunity for networking and talking with other people who are interested in these issues.
- Maxine Lipeles said it helped her understand the Water Quality Standards better and the importance of TMDLs.

NRCS is developing a form for requests of information from DNR staff.

Most *TMDLs scheduled for 2001* are waiting for a second set of data to be collected. Staff have been assigned to specific TMDLs through 2003. The TMDL document is being written more for the general public. It is difficult to put modeling information and TMDL calculations into terms that the general public can understand. A recent public meeting on the James River TMDL in Galena was difficult. Many agricultural producers were hearing fantastic rumors and it was difficult for them to read the document and understand what it was saying. The department wants to make the TMDL document more user friendly.

TMDL SUB-COMMITTEES

The sub-committees are open to anyone who has an interest. The groups can decide their own structure and agendas. Sub-committees will report back to the entire group on their meetings. DNR staff will serve as chairpersons for the first meeting and the group can choose a different chairperson if they desire. No one should feel obligated to be permanent member of a committee and can attend meetings when possible. TMDL meetings are public meetings and open to anyone that is interested in the process. Subcommittees cannot set actual policy, due to legal mandates regarding DNR's responsibilities. The sub-committees will provide input and feedback on the development of TMDL policies. Sub-committees may generate TMDL materials to be shared with the public.

Concerns:

- It may be more difficult getting one's viewpoint expressed once the group is broken down into subcommittees.
- Characteristic of TMDLs, all these different issues have to be taken into account together. It is important to bring the information back together.

It was asked if subcommittees will dilute the representation of environmental groups on issues? Scott Dye thought it would. It is hard to get several environmental groups to the table at the same time. But the dialogue should still be productive. The Missouri Coalition for the

Environment has commented on the TMDL Strategy Document and will continue to participate in these issues even if they cannot attend the meetings. The Farm Bureau representative has been able to attend few TMDL meetings, but still has great interest in the issues. Subcommittees will just proceed with those who can attend. Chairpersons should provide notes on subcommittee activities. There are tasks assigned to each group (see 7/17/01 agenda), but participants can add to the list as different issues arise. The Attorney General's office stated subcommittees are discussion groups and keeping notes that can be made available to the public upon request will be adequate to meet Sunshine Law requirements.

Feedback on the sub-committee breakout sessions: they are more productive and you feel like things are more likely to be accomplished; they are informative and useful.

The committee was informed that the reorganization of DNR will go into effect August 1. The next TMDL PAC meeting is September 18, 2001. There will be a discussion time on the official agenda to address the draft 2002 303d list.

Notes from PUBLIC PARTICIPATION (PP) Subcommittee meeting July 17, 2001

Present:

Wanda Eubank, North Fork Salt River Project
Priscilla Stotts, Stream Team Coordinator, Water Pollution Control Program (WPCP)
Donna Menown, Stream Team Coordinator, WPCP
Jeannette Schafer, EPA Region 7, TMDL Coordinator
Pat Conger, WPCP
David Goggins, Technical Assistance Program
Anne Peery, WPCP

Handouts (anyone who needs copies, please ask):

- Proposed Public Participation (PP) plan
- The Sunshine Law
- DNR fact sheets for Clear and Davis Creeks as examples to be reviewed.

Discussion:

- Wanda asked DNR to list precisely where in the TMDL process we expect public participation.
- Jeannette feels that the PP Plan is a grab bag of good ideas. It needs to state what it is exactly that DNR does or will do.
- Comments submitted by Bob Ball (NRCS) were summarized. Committee agrees DNR should contact Eli Mast of the Missouri Association of Conservation Districts for their input to the PP plan.
- Committee agreed that a brief handout of some sort, like a brochure, needs to be written. It would be a little canned presentation, even cartoons. Something that can be handed out to soil and water districts, League of Women Voters, real estate agents, continuing education units, etc, etc. And it would be good to have a tear-off portion to make comments on (or vent) to go back to DNR for response.

- Mentioned a web site for info on “Public Involvement in EPA’s Decisions”. A dialogue on the collaboration process (July 16, 2001) and other daily summaries are available from the agenda page of the web site: <http://www.network-democracy.org/epa-pip/join/agenda.html>
- Considered what is needed for us to comply with the Sunshine Law. It was noted that Task 3 on our agenda did NOT mean to address deficiencies in the SL, but rather in how we are applying it to our committees. We decided we need at least brief minutes from the subcommittees and a list of participants. DNR will contact the AGO to make sure.

Actions:

- This subcommittee will create a TMDL brochure (anyone want to make a first draft?).
- Participants will read the PP Plan and send comments to Anne within three weeks, by Aug 7th.
- We will meet by conference call in about one month (around Aug 14th). Anne will set this up. This is to discuss participants’ comments on the PP and still have time before the next PAC meeting for more steps.
- Send electronic version of the TMDL presentation to Wanda.
- Forward Mark Belwood’s comments to Wanda, Priscilla, Donna and Jeannette.
- DNR will contact Eli Mast.
- Anne will contact the AGO to make sure of Sunshine Law requirements.
- Committee review facts sheets.

Minutes from the DRINKING WATER SUBCOMMITTEE meeting July 17.

Those in attendance were:

Liz Grove (Clarence Cannon Wholesale Water Commission)
 Craig Reichert (DNR Macon office)
 Michael Heaton (DNR Macon office)
 Dan Downing (University Extension)
 Stephanie Lindberg (US EPA).

The group discussed the tasks that were listed on the July 17, 2001 TMDL PAC agenda. These task are listed below with a summary what the group talked about regarding these issues.

1. Provide information regarding overlaps or potential linkages between Drinking Water Program and Water Pollution Control Program that could be useful in the development and implementation of TMDL's.

Over the course of the last several years, the overlap between the Drinking Water Program (DWP) and Water Pollution Control Program (WPCP) has been increasing. One area of overlap is when a drinking water reservoir is on the 303(d) list. When this happens, frequent communication between the programs is needed. One good thing is some Regions have a TMDL person (WPCP) and a Source Water Protection person (DWP) in the same office, which helps this communication process. Another area of overlap could be through implementation. Some grants are administered through different parts of the DNR. Like CREP through DWP and 319 through WPCP. There needs to be an increase in communication between the two programs when doing implementation to maximize benefits. Other programs will also overlap, such as Soil and Water, DGLS, ETC.

The group needs to look at other areas of overlap. If there is a lack of communication between the two programs, the group needs to make recommendations on how to help correct the problem.

2. Develop recommendations toward using source water protection plans as TMDL's.

Several drinking water reservoirs have developed Source Water Protection Plans. The group discussed how to make a source water protection plan a TMDL or a TMDL into a source water protection plan. The group also discussed that the Source Water Assessments can be utilized in the development of a plan for a TMDL. Other grants are requiring a plan and DNR needs to standardize one plan that will work for all grants and not have one reservoir with three or four different plans.

The group needs to examine comments from EPA that discusses how to make the Vandalia Source Water Protection Plan into a TMDL (ATTACHED BELOW). Develop template on how to make a source water protection plan into a TMDL.

3. Suggest ways the resulting TMDLs can be implemented.

The group discussed several grants, such as 319, MOCREP, and SALT as possible ways for implementation. The group plans to develop a list of all grants and contacts.

4. Provide suggestions on how to educate drinking water community about TMDL issues.

The need for someone to speak at the AWWA, MWWC, and MRWA annual conferences so that the drinking water operators will be informed was discussed. Also spoke about the need to supply an informational pamphlet about TMDLs with the Consumer Confidence Reports. The group should work with the Public Participation subcommittee to develop an informational pamphlet.

The group decided to try to communicate our thoughts through e-mail. Look at the tasks and make comments to the rest of the committee via e-mail. If you think there is a different task that needs to be addressed, please list it along with any comments. The next PAC meeting is scheduled for September 18 and we will try to meet before the meeting. The group needs to focus on one task at a time and should we go in order or does one of the tasks need to be worked on first?

Notes from the TMDL PERMIT Sub-Committee Meeting on July 17, 2001

Participants:

John Dunn, EPA Region 7

Cindy DiStephno, MO Dept. of Conservation

Maxine Lipeles, Washington University Interdisciplinary Environmental Clinic

Mark Montague, MSD

Bruce Litzsinger, MSD

Cindy Hebenstreit, Missouri-American Water Co.

Mike Duvall, St. Charles County Government Division of the Environment
Mary West, City of Moberly

Handouts given to participants included:

- Copies of sections of the Federal law that may have implications for permitted entities in 303d listed waters
- Minutes from a meeting that DNR staff had with John Dunn regarding the issuance of permits in TMDL watersheds
- Case summaries regarding three permits that posed difficulty for the program because their discharges were into 303d segments
- Disseminated by email after the meeting was the section of the 2000 TMDL strategy document related to issuance of permits in 303d waters

John Dunn reported on previous EPA efforts to help states with this issue. A work group had been formed to develop national guidance on how to handle permits in TMDL waters, but the group is now disbanded. This occurred due to lack of policy direction on this issue from the new administration on this topic. John also provided information on the most difficult permit situation that has arisen in Region 7 (Missouri, Iowa, Kansas and Nebraska) which was the Wichita, KA permit. The very difficult problems that can arise when working with permits in impaired water bodies were evident.

The group discussed the possible ramifications for permitted entities that could result from the development of nutrient standards and the concerns regarding the hypoxia zone in the Gulf of Mexico. Participants were also interested in obtaining more information on Phase I and Phase II Stormwater permits. The question arose as to how can municipalities can set priorities when every program in DNR that they deal with feels their issues are the most critical. Considering the limited resources that every city deals with, the agency needs a more organized approach to know what to do first, because they can't do everything at once.

A list of permits that potentially could be impacted by TMDLs was distributed at the Policy Advisory Committee (PAC) meeting. The permit subcommittee requested DNR draft a letter to be sent to each of those facilities to inform them of this possibility. A draft will be presented at the next TMDL PAC meeting in September. The group was asked to review the case study handout (attached below) and provide their opinions about how DNR handled these situations or could have handled these situations better. The tasks assigned to this committee will be more directly addressed during the next sub-committee meeting.

Summary of TMDL AG SUBCOMMITTEE Minutes, July 17, 2001

Attendees were:

Don Yoest, MDA
Steve Bauguess, MDNR
Ken Streumph, MDNR
Damon Frizzel, EPA
John Bryan, Poultry Federation
Bob Broz, University Extension
Scott Dye, Sierra Club

Gail Wilson, MDNR.

Priority items were considered to be public participation in the TMDL process and the 303(d) list. Getting information in the form of articles into farming publications was discussed. The article on TMDLs in "Today's Farmer" was given as an example of information sharing. We need to get our message out to the farming community. In that way we can explain why TMDLs are happening, what they can expect and emphasize that voluntary, incentive programs will be used to address nonpoint source pollution. Bob Broz discussed Vandalia Lake and how the citizens worked together to implement Water Quality Management Practices. He said it takes three years to get a group together and working.

A list of upcoming TMDLs is needed for the subcommittee. Gail Wilson will provide that to the members. Ken Streumph suggested a presentation on TMDLs at the Soil and Water Conservation District Conference in the fall to educate district folks on what TMDLs are about. They should be our voice on Water Quality issues in the districts.

Integrators have a newsletter, and articles could be written for the poultry producing audience.

The next meeting is scheduled to be held an hour before the Water Quality Coordinating Committee on August 21. Other business in the meantime will be handled by e-mail. Things to think about for the next meeting:

1. List of targeted audiences and public meetings
2. Funding sources for best management practices
3. Schedule of upcoming TMDLs
4. E-mail addresses of the subcommittee members.

Minutes from TMDL Subcommittee on DATA AND MODELING July 17, 2001

The July meeting of the TMDL Advisory Committee resulted in breakout sessions for the subcommittees. We did not complete the agenda given to us at the beginning of the meeting, however we did complete introductions and a brief synopsis of our job duties. An agreement was made to meet the morning before our next advisory committee meeting in order to answer the questions provided from the previous meeting agenda.

The represented organizations and e-mail addresses of the current members of the TMDL Data and Modeling sub-committee are:

Alan Fandrey – BARR Engineering, Environmental, and Information Technology -
afandrey@barr.com

Randy Sarver – Missouri Department of Natural Resources - nrsarvr@mail.dnr.state.mo.us

Mohsen Dkhili - Missouri Department of Natural Resources - nrdkdim@mail.dnr.state.mo.us

Jodi Bruno – U.S. Environmental Protection Agency -bruno.jodi@epa.gov

Miya Barr – U.S. Geological Survey - mnbarr@usgs.gov

Trent Stober – Midwest Environmental Consultants, Co. - tstober@mecpc.com

Emitt Witt – U.S. Geological Survey - ecwitt@usgs.gov

Verel Benson – MU, Food and Agricultural Policy Research Institute - bensonv@missouri.edu

Using the Vandalia City Reservoir Watershed Management Plan to develop the TMDL for atrazine in Vandalia Reservoir (WBID 7032).

6 March 2001

The Vandalia Reservoir (WBID 7032) is on Missouri's approved 1998 Section 303(d) list for atrazine. The Vandalia Watershed Management Committee wrote a report titled "Vandalia City Reservoir Water Resources Management Plan", October, 1999, hereafter referred to as the Plan. The following are comments on the Plan for the purpose of using information in the Plan to develop the TMDL document.

There are no EPA regulations or guidance that describe how to write a watershed management plan; however, EPA and other entities have published information that is useful for watershed planning. Such publications include "Watershed Protection: A Project Focus" EPA- 841-R-95-003 (August 1995), "Putting Together A Watershed Management Plan, A Guide for Watershed Partnerships" Conservation Technology Information Center, and "National Planning Procedures Handbook (NPPH), Amendment 2, Part 600.2, NRCS Planning Process" United States Department of Agriculture, Natural Resources Conservation Services (April 1998). Plans written according to these recommendations are very useful for developing TMDLs, because much of the work required for the TMDL is done while preparing the watershed management plan.

The Plan is well written and consolidates a considerable amount of information about the watershed that drains into Vandalia Reservoir. Although the Plan was not written in the format or style of a TMDL document, several sections of the Plan may be used in a TMDL document with very little rewriting. The elements of a TMDL document are described in "Total Maximum Daily Load (TMDL) Program: Policy and Guidance" EPA Office of Wetlands, Oceans, and Watersheds, February 1997. The elements are: 1) Description of the waterbody, the pollutant of concern, the pollutant sources, and the priority ranking, 2) description of the applicable water quality standards and numeric water quality target, 3) the loading capacity under the critical conditions, 4) the Load Allocations, 5) the Wasteload Allocations, 6) the Margin of Safety, 7) consideration of seasonal variability, 8) a monitoring plan if a phased approach is used, 9) implementation plans for waters impaired primarily or solely by non-point sources, 10) reasonable assurances where non-point reductions compensate for less stringent point source reductions, and 11) evidence of full and meaningful public participation.

The following items and issues discussed or missing in the Plan will need to be clarified or added to the TMDL document:

1. The pollutant of concern is atrazine.

2. The sources of atrazine are non-point sources, resulting from agricultural practices. There are no known point sources of atrazine in the watershed.
3. The priority ranking is high because the waterbody is a source of drinking water. The 303(d) list does not provide a priority ranking for Vandalia Lake.
4. The applicable water quality standards must be described, which includes the designated beneficial use of the water and the numeric criterion to protect that designated use.
5. The numeric water quality target must be provided, and explained if the target is different than the water quality criterion for atrazine in the standards.
6. The critical conditions must be identified, and the loading capacity under the critical conditions must be determined. In this case, lakes accumulate pollutants and hold them for extended periods of time. The critical condition for atrazine will occur when the lake has the smallest volume and the water flowing into the lake has the largest amount of atrazine. The loading capacity is the maximum amount of atrazine in the lake at its smallest volume that results in a concentration that is less than the atrazine criterion. If the lake is not well mixed, then the critical conditions will require more complex analysis.
7. The Load Allocations must be established. (See below for discussion)
8. The Wasteload Allocations must be established. In this case, since there are no point sources, the Wasteload Allocation for atrazine is established as zero.
9. A margin of safety must be determined and incorporated in the Allocations. (See below)
10. Seasonal variation must be considered when deriving the Allocations.
11. A monitoring plan must be included if the TMDL uses the phased approach.
12. An implementation plan may be included, particularly if the waterbody is impaired primarily or solely by non-point sources.
13. If atrazine in the lake impacts any threatened or endangered species, then additional work will be required to satisfy the requirements of the ESA. The TMDL document should address this issue, whether such species are present, impacted, or neither.

When describing the atrazine sources in the TMDL document, it would be helpful to provide some history that describes historic levels of atrazine in the lake water and historic application rates in the watershed. Also, include descriptions of BMPs that have been implemented in the watershed, and discussion of the effectiveness of these BMPs to reduce atrazine levels in the lake, and whether the BMPs were abandoned or remain in place and why. It might also be appropriate to discuss BMPs that were considered but never implemented.

The TMDL document should mathematically describe the relationship between the application rates of atrazine in the watershed to the response in lake atrazine concentrations. The endpoint is the concentration of atrazine in the lake water. This relationship between the application rates and the endpoint can be determined with simple screening calculations or, assuming data are available, by a more complex model. One simple screening procedure is described in EPA's

1985 “Water Quality Assessment: A screen procedure for toxic and conventional pollutants in surface and ground water – Parts I & II: EPA 600/6-85/002a & b”.

Based on the above relationship, one allocation scheme would be to limit the total amount of atrazine that is applied in the watershed during the application season. The target under this scheme would be pounds of atrazine applied in the watershed per year. Another allocation scheme for atrazine could be a percent reduction of the existing loading. The target under this alternative scheme is the concentration of atrazine in the lake water. Regardless of which allocation scheme is used, the TMDL document must explain the allocation procedure, showing that the allocation is reasonable and is based on the data, and showing that the allocation will result in meeting and maintaining the applicable water quality standards.

The margin of safety may be implicit, by taking the most restrictive or conservative approach to the allocations, or, the margin of safety may be explicit, by establishing a percentage of the loading capacity that will be allocated. The TMDL document must include a rationale for the margin of safety that is used.

Since the water quality criterion for atrazine in the lake does not change with the season, the TMDL document may explain that the targets apply year round and are not different for different seasons. Also, lakes tend to accumulate a pollutant and hold it for extended periods of time.

Since all Missouri TMDLs are phased TMDLs, a monitoring plan must be included in the TMDL document. (See item 15 of the EQIP appendix attached to the Plan)

There is ample evidence in the Plan that there is full and meaningful public participation in the TMDL development process.

With a few additions and changes to clearly focus on atrazine and the voluntary agricultural practices that are being considered to reduce the atrazine levels in the lake, the Plan could be attached to the TMDL document to serve as an implementation plan for the TMDL.

SUMMARY OF SPECIFIC CASE STUDIES RELATED
TO PERMITS IN 303d LISTED WATERS

1. A café/convenience store applied for a permit to discharge 1100 gallons of domestic sewage to a tributary of the Elk River. The Elk is on the 1998 303(d) list for nutrient impairment from agricultural nonpoint sources. EPA guidance upon which Missouri's strategy document is based, clearly states that new or expanded permits which add to the pollutant load should not be issued until the TMDL is written. The Elk River TMDL is scheduled for development in 2003 and is included in the MOU related to the lawsuit settlement. The possibilities of hooking up to an existing treatment plant or land applying the effluent were not possible. Nor was pollutant trading as the mechanisms are not established and no existing permits in the watershed were being deactivated. Technically this permit could have been denied which would have required the owner to haul the effluent by truck to the nearest sewage treatment plant. The permit was issued due to the small size of the discharge, the fact that this discharge had nothing to do with the major source of the impairment which was ag nonpoint sources and with the understanding the permit limits could be changed when the TMDL is calculated.
2. A municipal treatment facility discharges lagoon effluent to a ditch in the boot heel. This ditch is listed for low dissolved oxygen (DO) caused by this discharge. The complicating factor is that the ditches can have low DO readings naturally. The department applied for a site-specific standard for the facility based on "naturally" occurring conditions. The site specific standard was denied by EPA as Missouri's WQ Standards do not an approved methodology for establishing site specific standards and the data submitted did not convince EPA the 5.0 DO standard could not be met. The facility had an upgrade scheduled and funded by SRF. They planned to add a county sewer district and a new subdivision to their plant. This would have increased the loading and discharge and the upgrade did not address DO issues directly. The permit revision could technically been denied. The suggestion was made that the city should seek funding for a mechanical treatment plant, but the public works people did not feel the money could be raised to undertake such a project at this time. Due to the advanced stages of planning and funding, the project is proceeding with some alterations to the upgrade. The county sewer district withdrew from the original plan to hook-up to this municipal and is seeking funding to build a separate regional treatment facility. The facility will have the same permit limits, but are aware these limits could change in 2003 when the TMDL is developed. One of the possible outcomes of the TMDL is the facility will choose to extend their discharge pipe to an unimpaired river that has larger flows. This would, however, result in them discharging to a river that gets high recreational use.
3. A municipality wants to revise their permit to include an upgrade to their oxidation ditch and a larger design capacity. They discharge to a prairie stream that has low flow regimes and naturally low DO. The stream is listed for DO impairment from the treatment facility. As in the previous case, it was not possible to establish a site-specific DO standard for this facility. The upgrades as described by the consultants would result in a major improvement

in facility operation and a higher quality effluent being discharged from the plant. They were also willing to add aeration to the discharge to raise the DO of the effluent. The permit was allowed to proceed, due to the improvement for the resource provided by the upgrade. The consultants realize the permit limits could change when the TMDL is written.